NAME: Mustafa Khan Roll Number: 00467831

Saturday 2 to 5

Technical Requirements for Favoric Scents in Next.js

Below is a detailed breakdown of the technical requirements for your business, **Favoric Scents**, using **Next.js**. This setup ensures a robust and scalable e-commerce platform tailored to your needs.

1. Frontend Requirements

The frontend of Favoric Scents should provide an engaging and intuitive user experience, reflecting the brand's aesthetic and ensuring seamless functionality.

- **Framework**: Next.js for server-side rendering (SSR), static site generation (SSG), and incremental static regeneration (ISR).
- Styling:
 - Use **Tailwind CSS** for a modern, responsive, and consistent design.
 - o CSS Modules or Styled-components for dynamic and reusable UI components.
- Components:
 - o **Product Cards**: Showcase product images, prices, descriptions, and offers.
 - o **Search Bar**: Provide a quick and efficient product search feature.
 - o **Filter and Sorting**: Allow users to filter by categories, prices, and popularity.
 - Responsive Design: Ensure optimal performance across mobile, tablet, and desktop devices.
- Performance Optimization:
 - Optimize images using the next/image component for lazy loading and responsive sizing.
 - o Enable code splitting and prefetching for faster navigation.
- **SEO**:
 - Use meta tags, Open Graph tags, and schema.org for search engine optimization.
 - o Dynamic routing for product pages (e.g., /product/[slug]).

2. Sanity CMS as Backend

Sanity CMS serves as the content management backend for organizing and managing your product catalog and website content.

Product Data Management:

- Schema for products: Name, description, price, category, SKU, stock availability, and images.
- o Real-time updates using Sanity's GROQ API.

• Content Management:

- o Manage homepage banners, promotions, and blogs via the Sanity Studio.
- Schema for categories and collections to ensure organized data.

Integration:

o Fetch data seamlessly using getStaticProps and getServerSideProps in Next.js.

• Role-Based Access:

- o Admin panel for product and content management.
- Controlled access for editors.

3. Third-Party APIs

Integrate third-party services to enhance functionality and user experience.

• Payment Gateways:

- o **JazzCash** and **EasyPaisa** for local payment processing in Pakistan.
- o **Stripe** or **PayPal** for international transactions (if required).

• Shipping and Logistics:

o Integrate APIs like **Shippo**, **EasyPost**, or local logistics partners for shipping cost calculation and tracking.

• Email Notifications:

Use SendGrid or Mailgun to send order confirmations and shipment updates.

• Analytics:

 Use Google Analytics or Vercel Analytics for tracking user interactions and traffic sources.

4. User Registration

Enable secure and seamless user account management to improve customer experience.

• Authentication:

 Use NextAuth.js for email/password registration and social logins (Google, Facebook).

• User Profile Management:

 Allow users to update personal details, view order history, and manage saved addresses.

• Role Management:

o Implement role-based access for admins and support staff.

5. Product Browsing

Offer an intuitive and visually appealing browsing experience for products.

• Product Listings:

o Dynamic category pages to display products fetched from Sanity CMS.

• Product Details:

o Dedicated product pages with detailed descriptions, images, and reviews.

• Search and Filter:

- o Global search functionality with autocomplete suggestions.
- o Filters for price range, categories, and availability.

• Wishlist:

o Enable users to save products for future purchases.

6. Order Placement

Ensure a seamless and secure order placement process.

• Cart Management:

o Persistent cart using local storage or session cookies.

• Checkout Process:

 Multi-step checkout: Cart review, shipping details, payment method, and order summary.

• Payment Methods:

- o Integration with JazzCash and EasyPaisa for local transactions.
- o Support for Stripe or PayPal for international customers.

• Order Summary:

o Display detailed order summaries post-purchase and send confirmation emails.

7. Shipment Tracking

Provide real-time updates for customer orders.

Order Status:

o Display order status: Processing, shipped, in transit, and delivered.

- Integration with Shipping APIs:
 - o Use logistics APIs to fetch real-time tracking details.
- Notifications:
 - o Send updates via email or SMS (using **Twilio** or Firebase).

8. Key Outcome

By implementing these technical requirements, **Favoric Scents** will achieve:

- 1. Enhanced User Experience:
 - o A fast, responsive, and user-friendly website optimized for e-commerce.
- 2. Efficient Operations:
 - o Sanity CMS ensures seamless content and product management.
- 3. **Scalability**:
 - o Next.js's SSR/SSG/ISR capabilities ensure the site can handle growth.
- 4. Improved Sales:
 - Easy browsing, secure local payments (JazzCash, EasyPaisa), and optimized checkout processes boost conversions.
- 5. Customer Satisfaction:
 - o Real-time shipment tracking and personalized notifications build trust and loyalty.